



ATTORNEY DOCKET NO. 17104.0005U2  
PATENT  
Page 1 of 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Abarzua et al.

U.S. Patent No. 6,777,183

09827289

Issue Date: August 17, 2004

For: PROCESS FOR ALLELE

DISCRIMINATION UTILIZING

PRIMER EXTENSION

Group Art Unit: 1637

Examiner: Jeffrey N. Fredman

Confirmation No. 5725

**REVOCATION OF PRIOR POWER OF ATTORNEY,  
APPOINTMENT OF NEW POWER OF ATTORNEY, AND  
STATEMENT UNDER 37 C.F.R. § 3.73(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859

Sir:

**STATEMENT UNDER 3.73(b)**

QIAGEN GmbH, a corporation of Germany states that it is the Assignee of the entire right, title and interest in the patent application identified above as evidenced by the following chain of title:

1. From: Patricio Abarzua  
To: Molecular Staging, Inc.  
Recorded at Reel 011902/Frame 0723
2. From: Molecular Staging, Inc.  
To: QIAGEN GmbH  
A copy of which is attached hereto.



ATTORNEY DOCKET NO. 17104.0005U2  
US PATENT NO. 6,777,183  
Page 2 of 2

**REVOCATION OF PRIOR POWER OF ATTORNEY**

As a representative authorized to act on behalf of QIAGEN GmbH hereby revoke all previous Powers of Attorney previously given.

**NEW POWER OF ATTORNEY**

The following attorneys/agents are hereby appointed to represent the above-identified Assignee in connection with all matters pertaining to the above-referenced application, with full power of substitution, association and revocation, to prosecute said application and to transact all business in the U.S. Patent and Trademark Office connected therewith.

The attorneys/agents associated with Customer No. 23859

Address all telephone calls to Robert A. Hodges, Esq. at (678) 420-9300.

Address all correspondence to the address of record for the following Customer Number:

**Customer No. 23859**

The undersigned (whose title is supplied below) is authorized to act on behalf of the Assignee.

QIAGEN GmbH

By:

  
Dr. Joachim Schorr

Title:

Managing Director  
Sen. VP Global

Date:

Research & Development

27.02.06

## **ASSIGNMENT OF PATENTS**

**WHEREAS**, Molecular Staging Inc. (hereafter "Assignor"), a Delaware corporation having a principal place of business at 300 George Street, New Haven, Connecticut 06511, is the owner of the patents (the "Patents") and the patent applications (the "Patent Applications") set forth on Schedule A attached hereto (collectively the "Patents and Patent Applications"), and the inventions described in and claimed therein (the "Inventions"); and,

**WHEREAS**, QIAGEN GmbH (hereafter "Assignee"), a German Gesellschaft mit beschraenkter Haftung having a place of business at Qiagen Str. 1, Hilden, 40724 Germany, is desirous of acquiring the entire right, title and interest of Assignor in and to said Patents, Patent Applications and Inventions.

**NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN**, that for good and valuable consideration in the amount of ten dollars, the receipt of which is hereby acknowledged, Assignor has sold, assigned, transferred and conveyed and by these presents does hereby sell, assign, transfer and convey, unto said Assignee, its successors and assigns, its entire right, title and interest in and to

(1) the Patents and Patent Applications throughout the world, the Inventions, all divisions, continuations, continuations-in-part and renewals of such Patents and Patent Applications, all patents which may be granted on such Patent Applications and Inventions, and all reissues, re-examinations and extensions thereof; and all reissues, re-examinations and extensions of such Patents;

(2) all applications for industrial property protection, including, without limitation, all

applications for patents, utility models, and designs which may hereafter be filed for an invention described in any of the Patents or Patent Applications in any county or counties foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from the Patents or Patent Applications under the Patent Laws of the United States, the Paris Convention, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable;

(3) all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for the Inventions in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and

(4) all claims for damages by reason of past infringement, with the right to sue for, and collect the same for the use of Assignee, its successors and assigns, as well as all of the rights incident to such ownership, including but not limited to manufacturing, use, sale and importation of the products and/or methods evidenced by the Patents and Patent Applications.

Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

Assignor hereby covenants and agrees that it has full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict herewith.

This Assignment is effective as of the 24<sup>th</sup> day of September, 2004.

IN WITNESS WHEREOF, Assignor has caused these presents to be signed by a duly authorized officer.

MOLECULAR STAGING INC., Assignor

By: Gregory E. Gardiner

Name: GREGORY E. GARDINER

Title: Director

On this 13<sup>th</sup> day of July, 2005, before me, a Notary Public, came Gregory E. Gardiner, to me known and known to be the individual described in and who executed the foregoing assignment, and he duly acknowledged the same to be his free act and deed.

Timothy F. Foley, Jr.  
Notary Public TIMOTHY F. FOLEY, JR.

My Commission Expires: 1-31-09

This Assignment is effective as of the 24<sup>th</sup> day of September, 2004.

IN WITNESS WHEREOF, Assignee has caused these presents to be signed by a duly authorized officer.

QIAGEN GmbH, Assignee

By: 

Name: Peer Schatz

Title: CEO

Witness:

Brigitte Lange-Rogi

Signature:

Brigitte Lange-Rogi

Witness:

Heidi Boulton

Signature:

Heidi Boulton



## Schedule A

### Patents and Patent Applications

Title	Country	Serial Number	Patent Number
Signal amplification with Lollipop probes	US	09/897,259	6,686,157
Protein expression profiling	US	09/597,836	6,531,283
Process for allele discrimination using primer extension	US	09/827,289	6,777,183
Polyprimed amplification of nucleic acid sequences	US	09/577,444	6,291,187
Polyprimed amplification of nucleic acid sequences	US	09/897,665	6,670,126
Open circle probes with intramolecular stem structures	US	09/803,713	6,573,051
Nucleic acid amplification	US	09/982,212	6,617,137
Multiply primed amplification of nucleic acid sequences	US	09/605,192	6,323,009
Generation of single stranded circular DNA from linear self...	US	09/723,685	6,498,023
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	US	09/547,757	6,368,801
5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	US	09/910,372	6,635,425
5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	US	10/465,759	6,811,986
Methods for selectively isolating DNA using rolling circle amplification	US	09/398,216	6,235,502
Methods for selectively isolating DNA using rolling circle amplification	US	09/818,927	6,576,448

Methods for selectively isolating DNA using rolling circle amplification	US	09/398,217	6,287,825
Methods for selectively isolating DNA using rolling circle amplification	US	09/562,331	6,346,399
Methods for selectively isolating DNA using rolling circle amplification	US	09/562,332	6,372,434
Methods for identifying DNA sequences for use in comparison of DNA samples by their lack of polymorphism	US	09/398,215	6,150,112
METHOD OF AMPLIFICATION	US	09/460,078	6,830,884
Universal RCA	US	10/405,822	
Suppression of cross-reactivity and non-specific binding of antibodies by Protein A	US	09/931,736	
Suppression of cross-reactivity and non-specific binding of antibodies by Protein A	US/CON	10/931,015	
Suppression of cross-reactivity and non-specific binding of antibodies by Protein A	WO	PCT/US02/27097	
Signal Amplification with Lollipop Probes	JP	2002-508032	
Signal Amplification with Lollipop Probes	EP	1950759.9	
Signal Amplification with Lollipop Probes	CA	2411794	
Signal Amplification with Lollipop Probes	AU	2001-271722	
Rolling Circle amplification of RNA	US	10/335,573	
Rolling Circle amplification of RNA	PCT	PCT/US03/39430	
Real time detection of rolling circle amplification products	US	10/325,665	
Protein Expression Profiling	US/CON	10/341,287	
Protein Expression Profiling	AU	2001-269944	
Protein Expression Profiling	CA	2,411,838	
Protein Expression Profiling	EP	1948505.1	



Protein Expression Profiling	JP	2002-503102	
Protein Expression Profiling	CN	1811542	
Protein Expression Profiling	TW	90114960	
Protein Expression Profiling	SG	200207285-8	
Protein Expression Profiling	WO	PCT/US01/19657	
Process for enhanced molecular target detection using layered rolling circle amplification	US	10/177,629	
Open circle probes with intramolecular stem structures	US/DIV	10,404,944	
Nucleic Acid Amplification	US	09/977,868	
Nucleic Acid Amplification	WO	WO03033724A	
Nucleic Acid Amplification	CA	2463933	
Nucleic Acid Amplification	AU	2002362874	
Nucleic Acid Amplification	EP	2801776.2	
Nucleic Acid Amplification	US/CIP	10/272,465	
Nucleic Acid Amplification	US/CIP	10/327,602	
Nucleic Acid Amplification	US/CIP	10/429,229	
Nucleic acid amplification – PCT of 10/327,602; 10/429,229; 10/456,056	PCT	PCT/US03/40364	
Quality assessment of amplified genomic nucleic acids	US	10/854,021	
Multiply primed amplification of nucleic acid sequences	DIV	09/920,571	
Multiply primed amplification of nucleic acid sequences	JP	2002/506247	
Multiply primed amplification of nucleic acid sequences	EP	1946712.5	
Multiply primed amplification of nucleic acid sequences	AU	200168725	
Multiply primed amplification of nucleic acid sequences	CA	2410951	
Multiply primed amplification of nucleic acid sequences	IL	153,097	

Methods for reducing the complexity of DNA sequences	US/DIV		
Methods for identifying genes associated with diseases of specific phenotypes	WO	PCT/US01/42827	
Methods for identifying genes associated with diseases of specific phenotypes	US	09/984,348	
Method of WGA with reduced artifact production	US	10/456,056	
Method for reducing artifacts in nucleic acid amplification	US	09/514,113	
Method for reducing artifacts in nucleic acid amplification	AU	41864/01	
Method for reducing artifacts in nucleic acid amplification	WO	PCT/US01/06491	
Method for reducing artifacts in nucleic acid amplification	EP	1913174.7	
Method for reducing artifacts in nucleic acid amplification	CA	2,401,650	
Method for reducing artifacts in nucleic acid amplification	JP	2001-563639	
Method for reducing artifacts in nucleic acid amplification	JP	2001-563639	
Method and compositions for efficient and specific rolling circle amplification	US	10/325,490	
Detection method using dissociated rolling circle amplification	US	10/072,666	
Generation of single stranded circular DNA from linear self...	US	10/196,539	
Generation of single stranded circular DNA from linear self...	WO	PCT/US00/32370	
Gene Expression Profiling	US	09/910,383	
Gene Expression Profiling	WO	PCT/US02/15045	
Double ligation Proximity mediated RCA	US	10/454,946	
Detection method using dissociated rolling circle amplification	PCT	PCT/US08/00678	

Conjugates of reduced antibodies and biomolecules	US	10/143,517	
Signal Amplification with Lollipop Probes	WO	PCT/US01/20933	
Signal Amplification with Lollipop Probes	US	60/215,639	
Repetitive enzymatic generation of single-stranded circular DNA	US	60/151,164; 60/222,799; 60/309,331	
Process for enhanced molecular target detection using layered rolling circle amplification	US	60/299,345	
Process for enhanced molecular target detection using layered rolling circle amplification	WO		
Process for allele discrimination using primer extension	US	60/194,843	
Process for allele discrimination using primer extension	WO	PCT/US01/11151	
Process for allele discrimination using primer extension	JP	2001-575244	
Process for allele discrimination using primer extension	EP	469920-105	
Process for allele discrimination using primer extension	CA	2,405,687	
Process for allele discrimination using primer extension	AU	2001/251359	
Polyprimed amplification of nucleic acid sequences	US	60/204,057	
Polyprimed amplification of nucleic acid sequences	WO	PCT/US00/16130	
Polyprimed amplification of nucleic acid sequences	JP	469290-18	
Polyprimed amplification of nucleic acid sequences	EP	938263.1	
Polyprimed amplification of nucleic acid sequences	CA		
Polyprimed amplification of nucleic acid sequences	AU		
Phosphorothiolate-directed ligation of	US	60/259,918	

oligonucleotides			
Open circle probes with intramolecular stem structures	WO	PCT/US02/02601	
Open circle probes with intramolecular stem structures	TW	91102150	
Generation of single stranded circular DNA from linear self-...	US	60/168,511	
Generation of single stranded circular DNA from linear self-...	JP	20011542579	
Generation of single stranded circular DNA from linear self-...	EP	980827	
Generation of single stranded circular DNA from linear self-...	CA	2,360,342	
Generation of single stranded circular DNA from linear self-...	AU	18040/01	
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	JP	2001-577404	
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	EU	1928481.9	
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	CA	2405456	
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	AU	US55331/01	
Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase	WO	PCT/ 01/11947	
Conjugates of reduced antibodies and biomolecules	US	60/299,671	
Conjugates of reduced antibodies and biomolecules	PCT	PCT/US02/14644	
5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	EP		

5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	CA	2,433,634	
5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	AU	2002/239809	
5' Thiophosphate-directed ligation of oligonucleotides and use in detection of single nucleotide polymorphisms	WO	PCT/US02/00005	
Methods for selectively isolating DNA using rolling circle amplification	US	60/100,996	
Methods for selectively isolating DNA using rolling circle amplification	US	09/820,356	
Methods for reducing the complexity of DNA sequences	US	60/100,999	
Methods for identifying DNA sequences for us in comparison of DNA samples by their lack of polymorphism	US	60/100,935	
Methods for identifying genes associated with disease of specific phenotypes	US	60/243,407	
Multiply primed amplification of nucleic acid sequences	WO	PCT/US01/200217	
Method of Amplification of a circularized nucleic acid probe	US	60/112,370	
Method of Amplification of a circularized nucleic acid probe	AU	27819/00	
Method of Amplification of a circularized nucleic acid probe	CA	2,394,800	
Method of Amplification of a circularized nucleic acid probe	EP	99969209.8	
Method of Amplification of a circularized nucleic acid	JP	2000-588388	

probe			
Method of Amplification of a circularized nucleic acid probe	<b>WO</b>	<b>PCT/AU99/01110</b>	
A cascade nucleic acid amplification reaction	<b>US</b>	<b>09/091,146</b>	
A cascade nucleic acid amplification reaction	<b>US</b>	<b>09/465,590</b>	
A cascade nucleic acid amplification reaction	<b>WO</b>	<b>PCT/DK96/00513</b>	
Cascade rolling circle DNA amplification	<b>US</b>	<b>09/356,843</b>	
A cascade nucleic acid amplification reaction	<b>EP</b>	<b>96939821.3</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>US</b>	<b>09/465,589</b>	<b>6,610,481</b>
A cascade nucleic acid amplification reaction	<b>AU</b>	<b>76917/96</b>	<b>704750</b>
A cascade nucleic acid amplification reaction	<b>DK</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>DE</b>	<b>696 27 698.4-08</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>CH</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>BE</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>SE</b>	<b>96939821.3</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>NL</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>IT</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>GB</b>	<b>868530</b>	<b>0 868 530</b>
A cascade nucleic acid amplification reaction	<b>EP/DIV</b>	<b>3000499.8</b>	
A cascade nucleic acid amplification reaction	<b>CA</b>	<b>2239287</b>	
A cascade nucleic acid amplification reaction	<b>FR</b>	<b>868530</b>	<b>0 868 530</b>
Method of amplification of a circularized nucleic acid probe	<b>US/CON</b>	<b>10/917,580</b>	